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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,211	09/19/2005	Soodesh Buljore	CR00560P	4528
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MOTOROLA INC 600 NORTH US HIGHWAY 45 ROOM AS437 LIBERTYVILLE, IL 60048-5343			EXAMINER RECEK, JASON D	
			ART UNIT 2109	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,211

Applicant(s)

BULJORE ET AL.

Examiner

Jason Recek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 7,8,21,22 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-20 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is in response to application 10/528211 filed on March 17th 2005, in which claims 1-24 are presented for examination.

Status of Claims

Claims 1-6, 9-20 and 23 are pending of which claims 1, 9 and 23 are in independent form.

Claims 7-8, 21-22 and 24 have been cancelled.

Claims 1 and 3 are currently rejected under 35 U.S.C. 102(b).

Claims 9-20 are currently rejected under 35 U.S.C. 102(e).

Claims 2, 4-6 and 23 are currently rejected under 35 U.S.C. 103(a).

Claims 5 and 12 are currently rejected under 35 U.S.C. 112 second paragraph.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it is more than one paragraph and because it makes reference to a figure. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 recites the limitation "said communication link" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 5 recites "IPv6 and/or IPv4" the phrase *and/or* renders the claim indefinite because it raises a question whether the link operates according to both specifications or only one.
3. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 recites the limitation "said configuration profile change" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by McAndrew GB 2350749 A.

Regarding claim 1, McAndrew discloses “determining at least one configuration profile changes of said software definable radio” as a user requiring a configuration change and advising a software server (pg. 6 ln. 22-24), alternatively the user can request configuration change by a control function (profile) on the software radio (pg. 8 ln. 11-15), these changes are equivalent of the configuration profile, “downloading software automatically to an intermediate communication unit, in response to said determination” as downloading software to an intermediate communication unit (pg. 6 ln. 26-27, Fig. 1) in response to the user’s or device’s request for reconfiguration (pg. 6 ln. 22-24), “re-configuring said software definable radio by said intermediate communication unit” as passing reconfiguration data to intermediate unit (pg. 7 ln. 1) then passing to software radio (pg. 8 ln. 24), and “wherein said configuration profile change is based on a change to at least one of the following: (i) A service required by said software definable radio” as a user advising what services are required (pg. 6 ln. 17-18), “(ii) A software definable radio user profile ...” as a user’s desire (profile

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information) of what configuration data or processes are the user wishes to use (pg. 11 ln. 16-25), the (iii) and (v) limitations are also disclosed as downloading configuration data when available (pg. 11 ln. 22-23).

Regarding claim 3, McAndrew discloses "accessing a remote communication network in order to provide the selected downloadable software" as communication with a wireless network that determines what software to download (pg. 11 ln. 16-22), and "synchronizing said software definable radio to said remote communication network in order to select and download software" as indicating a time when the software should be downloaded (pg. 11 ln. 25-27).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 9-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Mehta
US 2004/0029575 A1.

Regarding claim 9, Mehta discloses "a communication unit located between a software definable radio and one or more remote information databases that contains

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software to be downloaded to said software definable radio" as a management module for software defined radio (pg. 2 paragraph 27, Fig. 1), "at least one mapping database storing configuration profile mapping information of said software definable radio relating to at least one remote information database" as the management module communicates profile information (pg. 2 paragraph 30) and maintains a list of information relating to the radio including configuration data (pg. 3 paragraph 44), "a transport module, operably coupled to said at least one mapping database to facilitate communication between said communication unit and said at least one remote information databases" as a network interface (pg. 2 paragraph 29, Fig. 1), and "a controller, operably coupled to said at least one mapping databases and said transport module, to automatically request and receive downloadable software to said communication unit for forwarding to said software definable radio" as a control algorithm that requests software downloads for the software definable radio (pg. 2 paragraph 27, 32, Fig. 1 item 44).

Regarding claim 10, Mehta discloses "said transport module supports several network communication links for downloading at least one of software features and functions to said software definable radio using at least one of said several network communication links" as a network interface that supports wired and wireless networks for connecting to server to download software (pg. 2 paragraph 32).

Regarding claim 12, Mehta discloses "said controller selects automatically at least one communication link based on said configuration profile change" as a communication unit that defines procedures for control between the radio and the network based on reconfiguration and self-initiates reconfiguration (pg. 2-3 paragraphs 35-38).

Regarding claim 13, Mehta discloses "said controller is arranged to communicate communication link options to a user of said software definable radio to enable said user to select at least one of said several network communication links" as communicating with the operator of the SDR various information including interface control options (pg. 2 paragraph 30).

Regarding claim 14, Mehta discloses "said controller is arranged to receive configuration profile information from a user of the software" as exchanging profile information between the user and the management module (pg. 2 paragraph 30).

Regarding claim 15, Mehta discloses "said controller includes a filtering mechanism to generate a user profile based on determined operational requirements or habits of said user of said software definable radio" as a management module that maintains user interface details regarding the equipment (pg. 3 paragraph 44) such details include screen resolution and speech activation (pg. 3 paragraph 44) this is the

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type of information that would be determined from operational requirements or habits of a user.

Regarding claim 16, Mehta discloses "an application programmable interface, operably coupled to said controller and capable of operable coupling to said software definable radio, to upload software to said software definable radio from said communication unit" as an equipment interface that connects the management unit to the SDR (pg. 2 paragraph 27, Fig. 1).

Regarding claim 17, Mehta discloses "one of said databases is a mapping database" as the software is stored on a database in the network before being transferred to the module (pg. 2 paragraph 32), "to enable said communication unit, in response to determining at least one figuration profile change, to map said at least one change to a second locally stored database to provide reconfiguration software to said software definable radio" as the management module maintains a list concerning the SDR in response to profile information (pg. 3 paragraph 44), this list constitutes a locally stored database and helps the control functions provide the reconfiguration software to the SDR (pg. 3 paragraph 36).

Regarding claim 18, Mehta discloses "said configuration profile change includes at least one of the following changes: [...] (ii) A software definable radio user profile" as

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a user profile (pg. 2 paragraph 30), "(iv) Software Definable Radio terminal's capabilities" as configuration data and installed software (pg. 3 paragraph 44).

Regarding claim 19, Mehta discloses "the software definable radio configures an intermediate communication unit with at least one of the following items of information:

(i) At least one SDR configuration profile" as sending a configuration profile to a management module (pg. 3 paragraph 44-45).

Regarding claim 20, Mehta discloses "the software downloaded by said software definable radio includes at least one of radio access technology capabilities, enhanced features or new services" as downloading software so the SDR can operate on different wireless communications standards (pg. 1 paragraph 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAndrew in view of Van Den Heuvel et al. U.S. Pat. 6,223,030 B1.

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Regarding claim 2, McAndrew discloses "re-configuring said software definable radio, by said intermediate communication unit, using said downloaded software" as transferring the data to the software radio (pg. 8 ln. 24-25). McAndrew does not disclose "determining, by an intermediate communication unit, a number of communication links for download said software", "selecting at least one of said number of communication links" nor "downloading software to an intermediate communication unit in response to said step of selecting" however these are taught by Van Den Heuvel as a common communication system (intermediate unit) having multiple links for downloading software (col. 2 ln. 51-58, Fig. 1), selecting a link to use and downloading the respective software (col. 2 ln. 59-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify McAndrew by replacing the single software server with the multiple communication links of Van Den Heuvel. The motivation for doing so is to provide more access to software and thus enable the radio to be more configurable. The purpose of a software radio is its ability to be configured, therefore increasing the configurability of the radio would have been obvious.

Regarding claim 4, McAndrew does not disclose "providing at least one of a user of said software definable radio and the intermediate communication unit with the ability to select one or more communication links to download said software" however this is

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taught by Van Den Heuvel as providing a list of available systems to the user for selection (col. 2 ln. 54-55).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify McAndrew by replacing the single software server with the multiple communication links of Van Den Heuvel. The motivation for doing so is to provide more access to software and thus enable the radio to be more configurable. The purpose of a software radio is its ability to be configured, therefore increasing the configurability of the radio would have been obvious.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McAndrew in view of Imamatsu U.S. Pat. 6,687,901 B1.

Regarding claim 6, McAndrew does not specifically disclose "mapping, in response to said determination of one or more configuration profile change(s), said change(s) to a locally stored database to provide reconfiguration software to said software definable radio" however this is taught by Imamatsu as a database in a software supply device (101 Fig. 2, 53 Fig. 3) that holds configuration software and provides reconfiguration software to the radio device based on changes made at the radio device (col. 4 ln. 54-61).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify McAndrew with the database of Imamatsu for the purpose of mapping configuration changes. The motivation is to keep track of the version of control software so it can be determined when an update is needed, thus reducing the need for redundant checking and eliminating excessive traffic between the devices.

8. Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAndrew in view of Dowling U.S. Pat. 7,032,009 B2.

Regarding claim 5, McAndrew does not specifically disclose "said communication link operates in accordance with an IPv6 and/or IPv4 specification" however Dowling discloses a communication link that transfers software to the device using TCP/IP (col. 10 ln. 63-67), this link would use IPv4 or IPv6 to transmit packet data.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify McAndrew by using TCP/IP as taught by Dowling for the purpose of sending data. It is well known in the art to use IP to send packet data between devices, it is a known technique that yields predictable results.

Regarding claim 23, McAndrew discloses "a software definable radio" as a software defined radio (pg. 4 ln. 6-7, Fig. 1), "an intermediary device, operably coupled to said software definable radio and comprising memory for storing software required by

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said software definable radio" as an intermediate apparatus that connects to the radio and has storage for software to be transferred (pg. 4 ln. 9-11, Fig. 1), and "such that said software required by said software definable radio is distributed between said intermediary device and at least one of the number of database in said communication network" as downloading the software form a software server onto the intermediate device (pg. 6 ln. 26-27, Fig. 1). McAndrew does not disclose "a communication network having a number of databases storing software applicable to said software definable radio" however this is taught by Dowling as a network containing a multitude of servers (col. 5 ln. 41, Fig. 1), each server having memory storing software for the radio (col. 3 ln. 56-63).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify McAndrew with the multitude of servers / databases taught by Dowling. The motivation for doing so is to provide more access to software and thus enable the radio to be more configurable. The purpose of a software radio is its ability to be configured, therefore increasing the configurability of the radio would have been obvious. Also, adding multiple servers increases the redundancy of the system, by having more than 1 server the system may still operable in the case of a failure.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta in view of Dowling.

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Regarding claim 11, Mehta does not specifically disclose "said transport module supports at least one of version 4 and version 6 of TCP/IP suite of application protocols" however Dowling discloses a communication link that transfers software to the device using TCP/IP (col. 10 ln. 63-67), this link would use IPv4 or IPv6 to transmit packet data.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mehta by using TCP/IP as taught by Dowling for the purpose of sending data. It is well known in the art to use IP to send packet data between devices, it is a known technique that yields predictable results.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Russell US 2004/0249915 A1 discloses a software defined radio having user profiles that dictate how the radio interacts with networks.

Jamadagni U.S. Pat. 7,139,551 B2 discloses downloading software to an adaptable terminal.

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Sridhar et al. US 2003/0216927 A1 discloses automatic reprogramming of software radios.

Ralston et al. U.S. Pat. 7,188,159 B2 discloses downloading software to a configurable device.

Dowling U.S. Pat. 6,965,914 B2 discloses using location information with software radios.


Davenport U.S. 6,937,877 B2 discloses dynamically configuring software radios using a plurality of data networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Recek whose telephone number is (571) 270-1975. The examiner can normally be reached on Mon - Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Recek
8/16/07


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